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THE KEY VILLAGE SCHEME

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BY

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Livestock Improvement in Madras State through the Key Village Scheme

According to the latest census of cattle, the Madras State has got about 41 lakhs of cows and 13 lakhs of she-buffaloes of breedable age. To improve the above animals by grading up with pure bred bulls of known pedigree and parentage, 41,000 bulls and 13,000 buffalo bulls will be required at the rate of one bull for 100 cows or buffaloes of breedable age, whereas the State has now got only about 1,200 approved bulls and all the Government farms and the Pattagar's Farm at Palayakottai are expected to produce only about 150 bulls every year. There is thus a wide gap between the availability and requirements of bulls. The question of starting more number of farms by Government with a view to bridging this gap, cannot be thought of at present, in view of the heavy initial and recurring expenditure that will be involved and the present financial stringency. The question of grading up the village cattle by using superior bulls in a contiguous area and eliminating breeding by scrub bulls in that area has been under consideration for a number of years, and the outcome of this is the " Key Village Scheme ".

The Key Village Scheme has been before the public for some years now, but it should be admitted without reserve that the progress so far made is anything but satisfactory. This is one of those schemes which will stand to the credit of the Indian Council of Agricultural Research at all times and is pregnant with great potentialities. If properly worked, it will change the entire complexion of the livestock wealth of this country in the not distant future. If it had not made much headway, it is due to the absence of an all-out effort on the part of the States and to the lack of correct appreciation of the details of the scheme. Not less important is the fact that the officers engaged on this work should adapt themselves to village conditions, should be rural-minded, live in the midst of their work as much as possible and take a live interest in this work. It is a stupendous work requiring all the zeal and enthusiasm of a missionary.

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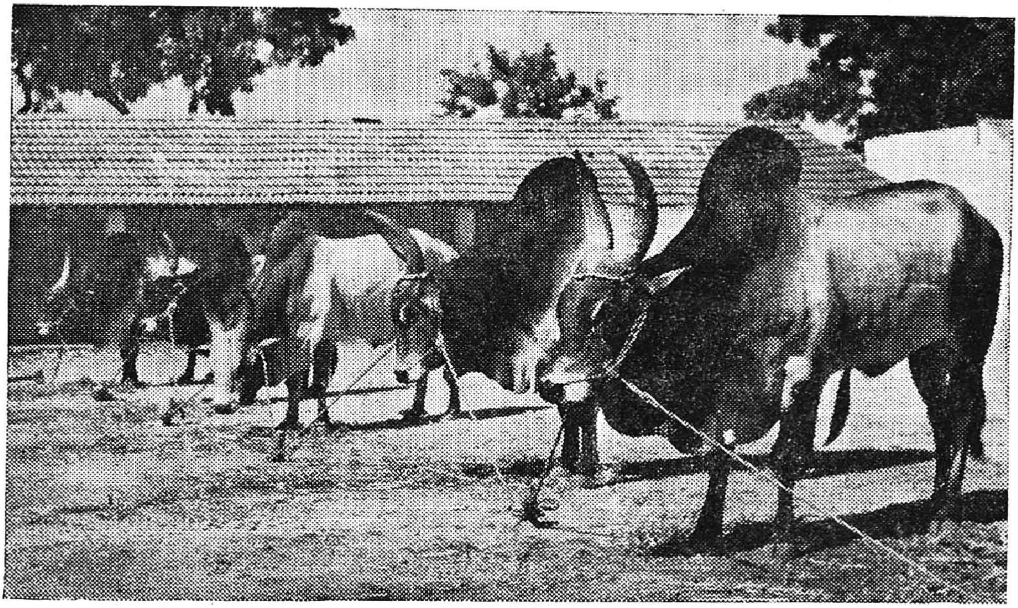
There has been quite a lot of confused thinking over this term "The Key Village Scheme". The term "Key Village" has a specific meaning. It is used in the sense that it is the chief element in the proposed or planned system of rapid livestock improvement work in this country. It is comparable to a "Key stone" in an arch. It is used in the sense that it is the pivot on which the entire system of livestock improvement is proposed to revolve or rotate. It is a village which will keep open its supply of improved livestock for further developmental work in other areas. In short, it is a village which will occupy a "Key position" in our scheme of Livestock Improvement work in this country.

The key village is an intensive cattle improvement unit worked in a compact area of one village or a group of contiguous villages containing a total population of about 500 cows or she-buffalœs over three years of age fit for breeding or milk production.

It is ideal to start the scheme in the breeding tracts where already a definite and well-established pure breed of cattle of certain standard exists and is also in line with genetic principles. The Key Village Centre in such a tract is expected to start off straight away with highly specialised selective breeding, using only superior bulls of known pedigree as far as possible, either from Government farms or from private cattle breeders of some standing and repute, aided of course with necessary breeding records, Livestock Improvement Acts, etc. So a Key Village Centre is meant to multiply pure bred stock, under controlled and scientific conditions as quickly as possible and issue the male progeny to other areas.

Lately this term was applied rather loosely even for "grading up" centres. For instance, a rural welfare centre or a village livestock improvement centre in a non-breeding tract with one or two stud bulls stationed there is often referred to as a Key Village Centre. How can one or two stud bulls put on a varied hetrogenous group of village cattle of unknown genetic make up for colour, constitution, performance, etc., be expected to provide us with stud bulls of required purity and standard within a short time? Granting, the continuity of this grading up work is kept up, it will take at

least 20 to 25 years to draw bulls of pure breed from such a centre. Such centres may be termed as "*Grading up Centres*" *but not* "*Key Village Centres*".



KANGAYAM BREEDING TRACT.

Key Village Centre, Vellakoil—Kangayam pedigree bulls in the centre.

The advantages of starting the key village scheme in the breeding tracts are manifold :

(1) The generality of cattle there, are already pure stock; their type is fixed; they breed true and we step in only to build up high pedigreed stock by scientific and controlled breeding.

(2) The male progeny of the first generation itself will be available for distribution as breeding bulls for other grading up centres in non-breeding tracts.

(3) The ryots are livestock minded.

(4) The ryots though illiterate, know the elementary principles of breeding and realize the advantages of pedigree breeding.

(5) The co-operation of the ryots will be readily forthcoming for implementing the scheme.

(6) The animals can be registered to start with itself in the herd register to be opened.

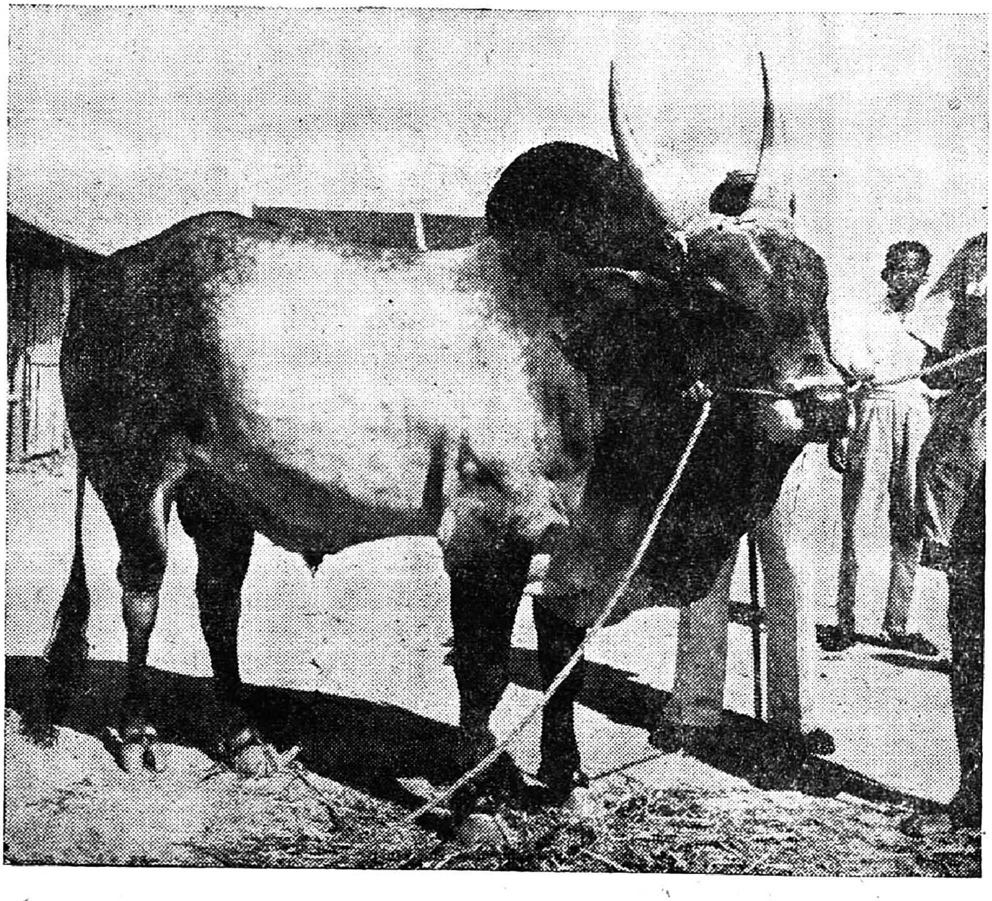
(7) Pedigree records can be maintained and the progeny marked.

(8) The Scheme is bound to be a success.

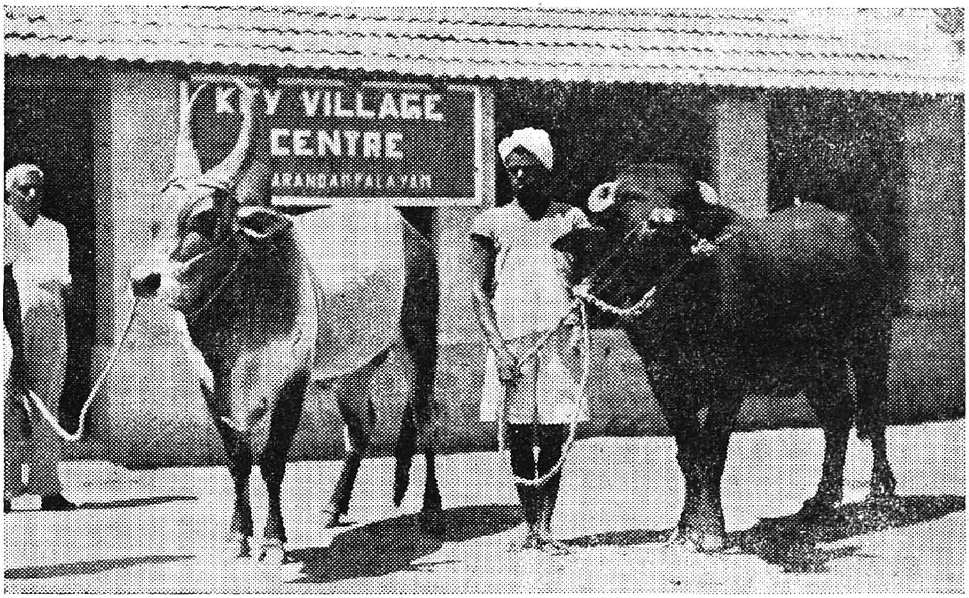
(9) In course of time, the management, etc., can be left to the villagers themselves to be run through an association to be formed.

Items of work to be carried out in the Key Village Scheme.

1. *Survey.*—A house to house survey for each key village has to be undertaken to start with, regarding the census of all classes of livestock (cattle, sheep and goats, poultry, etc.), the number of holdings, etc., by the ryots, acreage maintained for food crops, cash crops, growing of fodder crops, cultivation of perennial grasses, hay making, sileage-making, methods of breeding, marketing of cattle, dairying, etc., and all particulars recorded in a separate register.



A fine specimen of the Kangayam Breed.



Key Village Centre, Sankarandampalayam—Kangayam bull and Murrah Buffalo bull in the centre.

2. *Breeding.*—Livestock Improvement Act should be enforced. Only pedigree bulls approved by the committee (to be formed among the villagers) should be located in the village and all the other bulls should be castrated compulsorily. Necessary records have to be maintained by the staff appointed for the scheme.

3. *Artificial Insemination.*—This should form an integral part of the Centre's work. This should help us to locate the superior germ plasm available in the country in each breed of cattle and thus hasten the day of producing superior cattle. Intensive propaganda should be carried out for the Artificial Insemination work; and this should be preferred to natural service. As the ryots are very conservative and sceptical to new things, confidence should be created first amongst the ryots by talking to them frequently and enlightening them as to what is happening in other countries regarding the livestock improvement work, etc.

4. *Feeding.*—This should be always associated with scientific and controlled breeding. Correct feeding standards for various classes of cattle should be carried out. The success of the scheme depends only on good feeding. The ryots should be advised to keep only good stock and to weed out the

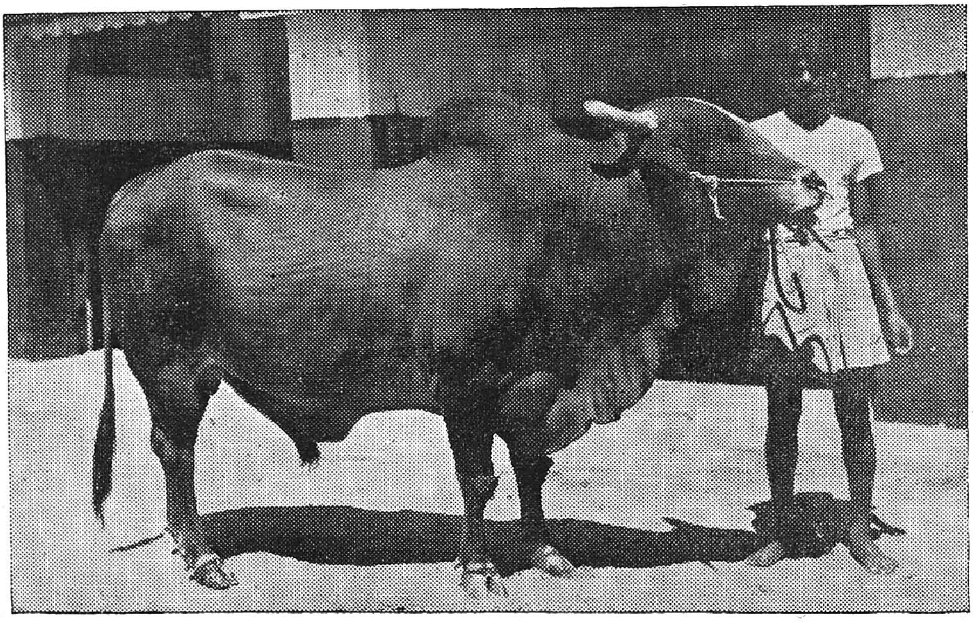
undesirable ones. Fodder should be conserved for one year at least. Perennial grasses should be cultivated. Arrangements should be made for procuring concentrates at cheap rates and distributed to the ryots through a common agency.

5. *Disease control.*—Contagious diseases of cattle are the greatest impediment to the growth of livestock industry. Contagious Cattle Diseases Act should be enforced in the area. The animals in the village should be periodically protected against the contagious diseases before the onset of the season. This can be done by carefully maintaining and studying the records as to the seasons for the spread of contagious diseases in those areas.

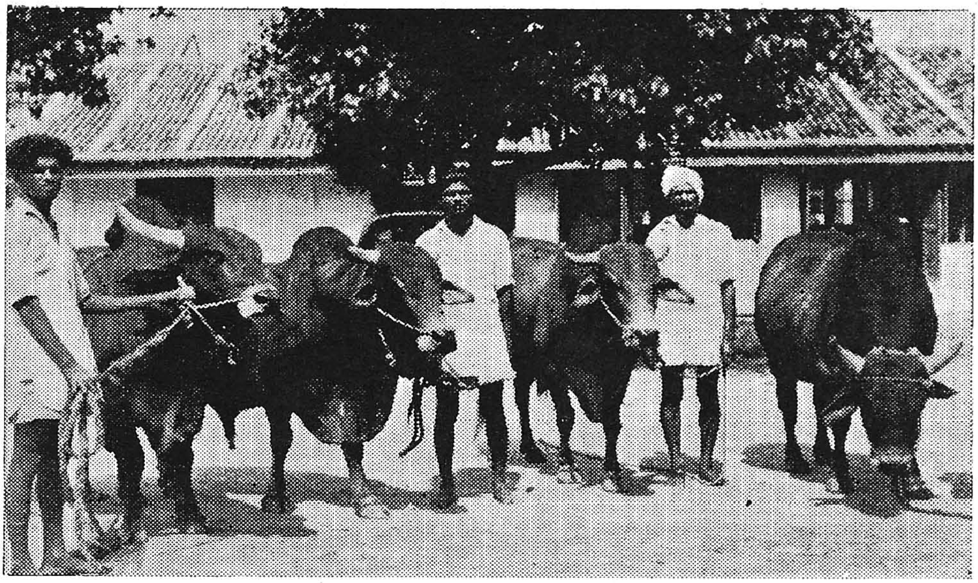
Treatment also should be undertaken in the villages for ordinary ailments of cattle.

6. *Marketing.*—This item only is of considerable importance to the villagers as they derive immediate benefit financially. This should be studied carefully by the staff, and the ryots should be helped by proper marketing of their cattle.

N.B.—**Young stock (selected male progeny, suitable for breeding purposes) should be purchased from the ryots and reared in a farm to be opened by the Governmetn.**



Key Village Centre, Cinchona—Graded Sindhi bulls.



Graded Sindhi Bulls.

7. *Dairying.*—Milk recording should be carried out for all the cows in the village. Surplus milk should be pooled and arrangements made for marketing the produce to the nearest city where there is a demand. This will certainly give an incentive to the ryots for the proper feeding of their stock, as they will be getting an additional income through the sale of milk and milk products.

8. *Propaganda.*—This is an important item of work in the scheme. Every opportunity should be taken by the staff to enlighten the ryots on scientific livestock management. All improved methods of Animal Husbandry have to be undertaken by the ryots themselves and they should take confidence in the work they are undertaking. Not only adults but the younger generation also should be taught the correct methods of animal husbandry.

In fact, the Key Village Centre should be the nucleus of all livestock activities (i.e.), should be a livestock breeding centre, a treatment centre, a dairy centre, a fodder production centre, an Artificial Insemination Centre, a propaganda centre and a marketing centre of livestock and its products.

Implementation of the Scheme.

In the year 1951, the Indian Council of Agricultural Research prepared a scheme known as "The Key Village Plan" for cattle improvement in India and offered to share

50 per cent of the expenditure in working the scheme. The scheme was modified with reference to the conditions in this State and sanctioned by Government in August 1952. A scheme similar to the one mentioned above was already functioning in this State in the seven livestock farms. With the sanction of the new Key Village Scheme, the earlier scheme was merged with the Key Village Scheme and commenced functioning at seven suitable centres from January 1953.

The most important thing to be considered for the successful working of the scheme is the proper location of the centres where utmost co-operation of the ryots will be available and where there is already a definite type of cattle.

Though the scheme was started in October 1951, as forerunner of the Key Village Scheme, the centres were not working satisfactorily as they were not located properly. Hence the centres had to be shifted to different breeding tracts. At present there are 15 key village main centres with 60 key

Propaganda is an important item of work in the Key Village Scheme. Sri M. Bakthavathsalam, Minister for Agriculture, is seen inspecting an exhibition of the department.

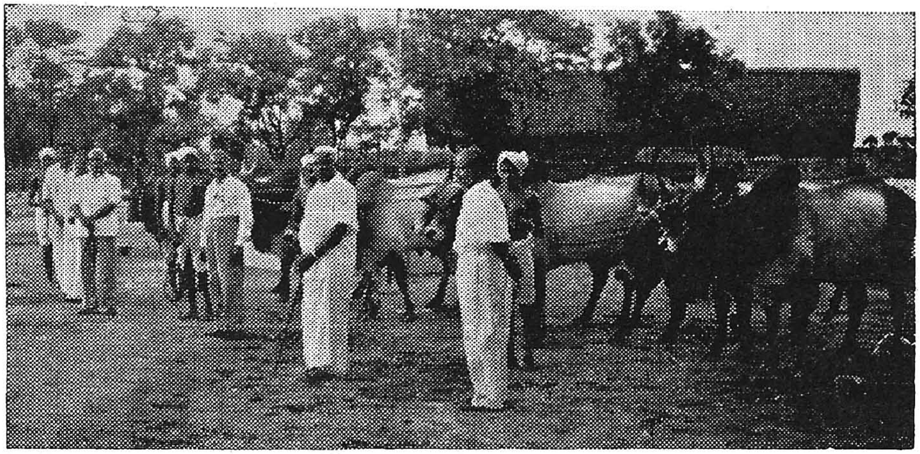
Artificial Insemination " Calf Rally " in one of the Key Village Centres in the Kangayam Tract. Sri C. Subramaniam, Minister for Finance, Government of Madras, is seen in the centre fondling a calf.

villages attached to them and they are distributed as mentioned below :—

1. Kangayam ..	Coimbatore district.	The ten centres are located in the Kangayam breeding tract for improving the Kangayam breed of cattle as it is the only recognized breed of All-India importance in this State.
2. Vellakoil ..	,,	
3. Sivagiri ..	,,	
4. Sankarandampalayam.	,,	
5. Mulanur ..	,,	
6. Chikkanapuram.	,,	
7. Malayandipatnam.	,,	
8. Thoppampatti.	Madurai district.	This breed is holding sway in almost all the southern districts of this State.
9. Idayakottai ..	,,	
10. Neikarapatti ..	,,	

11. Cinchona ..	Coimbatore district.	This centre is for improving the Sindhi breed of cattle in Anamalais hills, a compact area, where the cattle are being graded up with Sindhi. All the cattle are now in the fourth or fifth generation of graded Sindhis.
12. Hosur Cattle Farm.	Salem district.	This Centre is meant for improving the Hallikar cattle of that area as the predominant breed is Hallikar in that area.

A gro up of calves born by Artificial Insemination method.



Selection of the right type of bulls is very important in livestock development. Sri D. Pattabhiraman, the Director of Animal Husbandry (Livestock), Madras, is seen selecting bulls for purchase.

13. Valarpuram ..	Chingleput district.	These three centres have been located in non-breeding areas where the type of cattle is non-descript and to grade the cattle with Sindhi and Murrah buffalo bulls to aid the Co-operative Milk-supply Unions. When compared with the other centres, the work of the centres located in non-breeding areas is not satisfactory.
14. Kilacheri ..	,,	
15. Chidambaram ..	South Arcot district.	

Each key village main centre is in charge of a qualified Veterinary Assistant Surgeon, assisted by two stockmen or Veterinary and Livestock Inspectors, who are all trained in Artificial Insemination work. Four key villages are attached to the main centre and each key village is in charge of a Stockman or Veterinary and Livestock Inspector. All of

them should reside in their respective villages, move closely with the ryots, and talk to them periodically about the improved animal husbandry practices, etc.

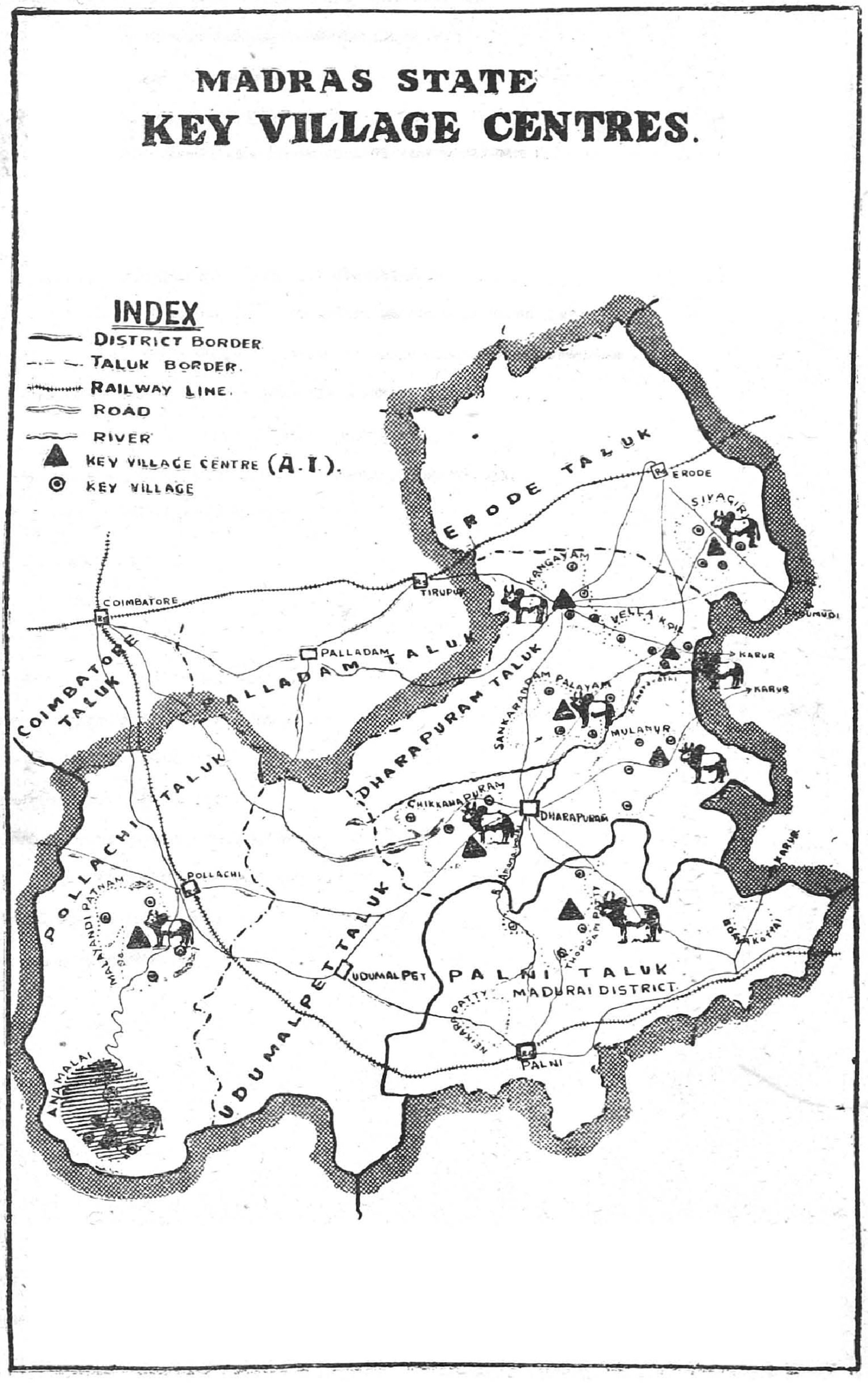
In each key village, two bulls of known parentage are entrusted to ryots interested in cattle breeding, for maintenance. In order to enable the custodians to maintain the bulls, in good condition and fit for service, a subsidy of Rs. 30 per mensem per bull is paid. The bulls are intended for natural services in the village. Records as to the performance of the bull progeny, milk yield, etc., are being maintained.

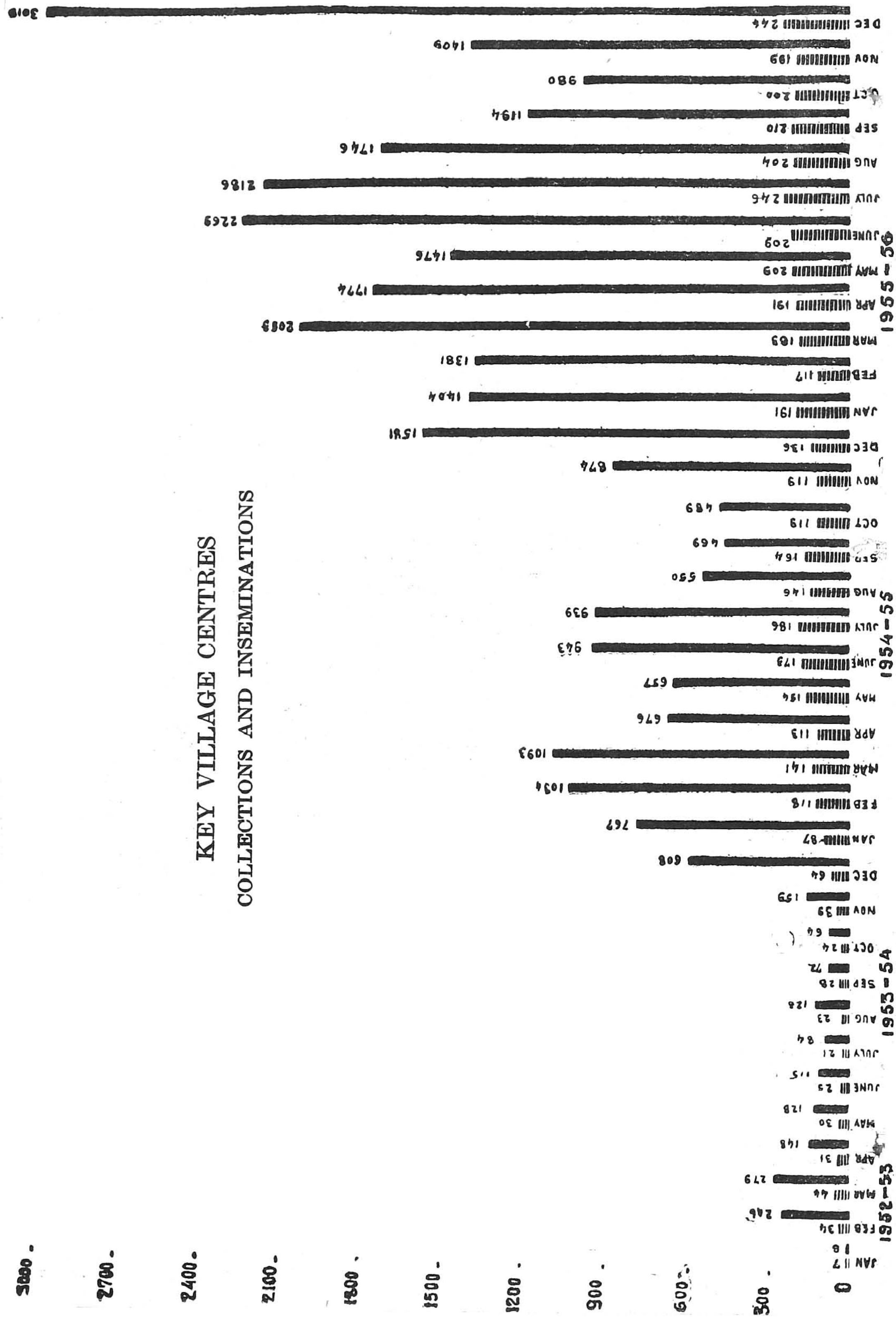
Each key village is expected to produce 100 bulls per annum. In order to supplement the natural services, the technique of Artificial Insemination is also applied in such villages. For this purpose, there is an Artificial Insemination Centre for a group of four key villages, the centre being situated at the most favourable place from all points of view. Four bulls of known pedigree are stationed in each Artificial Insemination Centre. Semen is collected from the bulls, diluted properly and sent for insemination in the attached key villages.

Every insemination done in that area is being followed up by the staff and the results are recorded. In fact all the items mentioned previously in the programme of work are being carried out.

As this is a new technique and as the village ryots are very conservative to adopt new methods, the staff have been requested to be very careful in the insemination work to get the maximum percentage of success. There was some difficulty in pushing the work till a ryot was able to see the calf born by this method. Afterwards all prejudices towards this method had waned and to-day the experienced ryots are doing propaganda to other ryots about the advantages of this method.

In fact, there are innumerable requests from the ryots in all the districts to open more key village centres. This kind of work is a highly specialised nature of work and it has to be carried out with great care to ensure the maximum success. The object is to create each key village centre into a miniature cattle farm by proper selective breeding control and to build up pedigree records, etc. Each centre will be a nucleus seed


MADRAS STATE
KEY VILLAGE CENTRES.
INDEX
DISTRICT BORDER
TALUK BORDER.
RAILWAY LINE.
ROAD
RIVER
KEY VILLAGE CENTRE (A.I.).
KEY VILLAGE
ERODE TALUK
ERODE
SIVAGIRI
KANGAYAM
TIRUPUR
COIMBATORE
VELLA KOIL
PALLADAM
PALLADAM TALUK
COIMBATORE TALUK
DHARAPURAM TALUK
SANKARANDAM PALAYAM
KARUR
MULANUR
CHIKKANAPURAM
DHARAPURAM
POLLACHI TALUK
POLLACHI
MALAYANDI PATNAM
UDUMALPET TALUK
UDUMALPET
PALNI TALUK
MADURAI DISTRICT
THOPPAM PATTY
PALNI
ANAMALAI


KEY VILLAGE CENTRES
COLLECTIONS AND INSEMINATIONS
1952-53
1953-54
1954-55
1955-56
0
300
600
900
1200
1500
1800
2100
2400
2700
3000

farm producing pure bred bulls for intensive development work in other non-breeding areas.

In all the centres, calves of good type fit for breeding purposes are selected and a subsidy of Rs. 5 a month is given for 24 months.

Calf rallies and cattle shows are arranged periodically to create enthusiasm and competitive spirit in raising good type of animals.

The progress of work turned out at each centre will reveal the good work done by this department in improving the cattle wealth of this State in particular.

During the Second Five-Year Plan, it is proposed to extend the area of these centres to attach two more key villages so as to have six key villages for each key village centre which will cover a total of about 5,000 cows and buffaloes of breedable age. Also 20 additional key village centres with 120 key villages are proposed to be established at the rate of 4 centres, each year.

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1. KANGAYAM ARTIFICIAL INSEMINATION CENTRE.

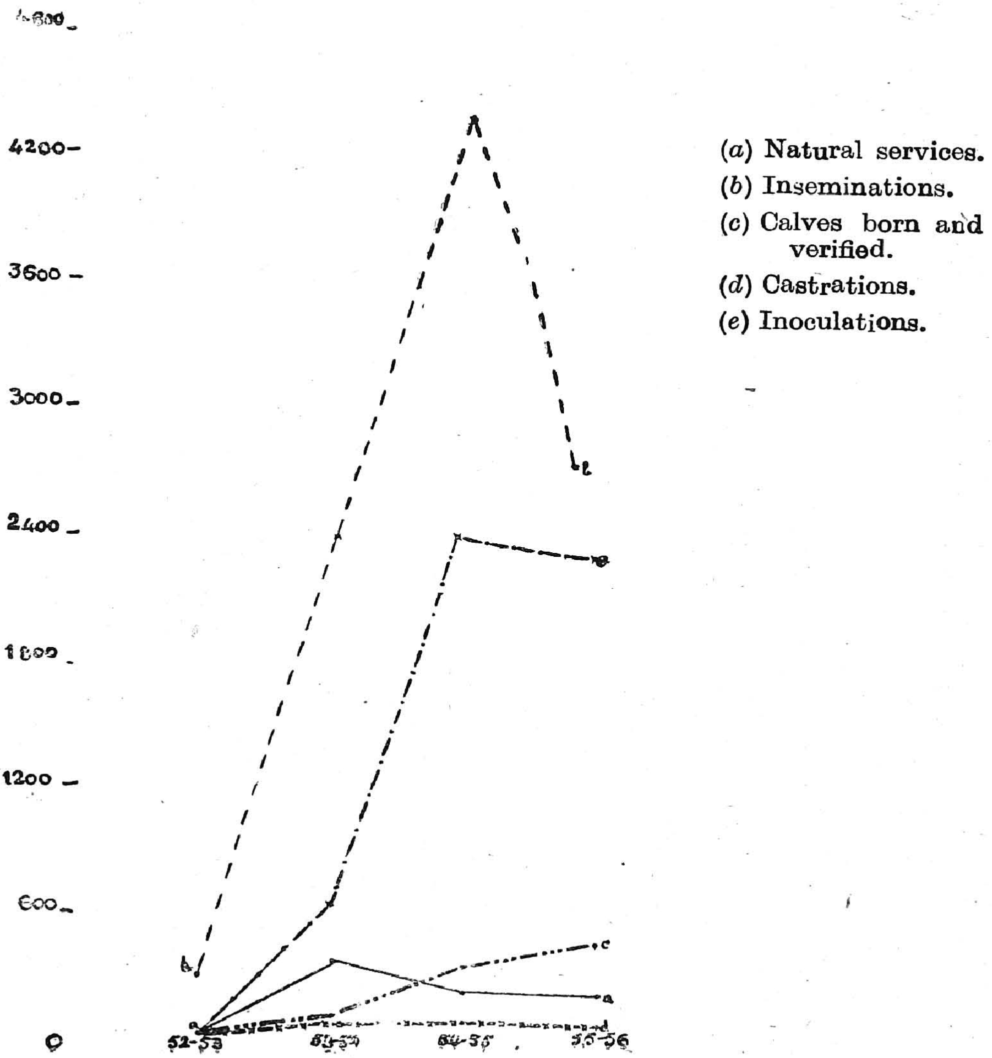
1 Name of centre—Key Village Centre, Kangayam.

2 Date of opening—10th January 1953.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56 (up to 30th November 1955).	Total.
(a) Natural services ..	..	349	186	168	703
(b) Inseminations ..	277	2,382	4,373	2,754	9,786
(c) Calves born and verified.	..	67	309	427	803
(d) Castrations	..	48	47	23	118
(e) Inoculations ..	..	627	2,358	2,192	5,177

KEY VILLAGE CENTRE, KANGAYAM



2. VELLAKOIL ARTIFICIAL INSEMINATION CENTRE.

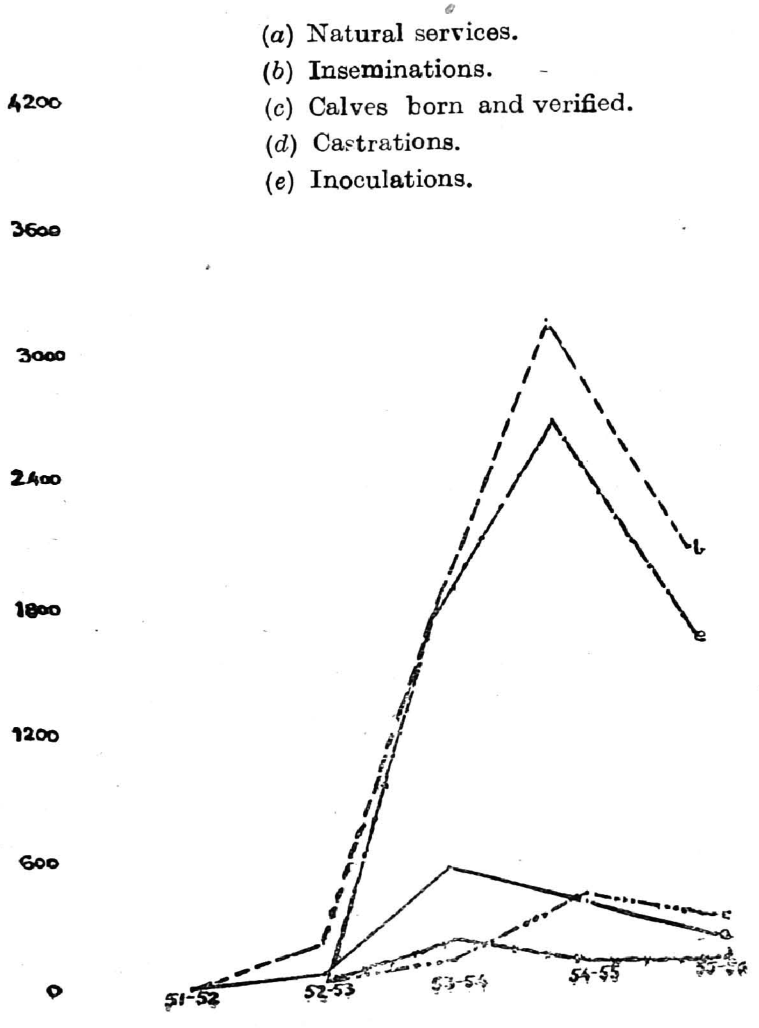
1 Name of centre—Key Village Centre, Vellakoil.

2 Date of opening—19th December 1952.

3 Progress of work—

	1951–52.	1952–53.	1953–54.	1954–55.	1955–56 (8 months).	Total.
(*a*) Natural services.	..	20	530	310	227	1,087
(*b*) Inseminations.	..	176	1,681	3,092	1,990	6,939
(*c*) Calves born and verified.	..	..	77	357	224	658
(*d*) Castrations ..	..	..	161	46	33	240
(*e*) Inoculations.	..	..	1,695	2,603	1,384	5,682

KEY VILLAGE CENTRE, VELLAKOIL.



3. SIVAGIRI.

1 Name of centre—Key Farm Centre, Palayakottai, shifted to Sivagiri.

2 Date of opening—26th January 1953 and 1st April 1955.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services ..	150	760	620	132	1,662
(*b*) Inseminations ..	19	134	46	1,289	1,488
(*c*) Castrations	..	21	5	34	60
(*d*) Calves born and verified.	..	27	52	..	79
(*e*) Inoculations	..	2,607	1,395	2,247	6,249

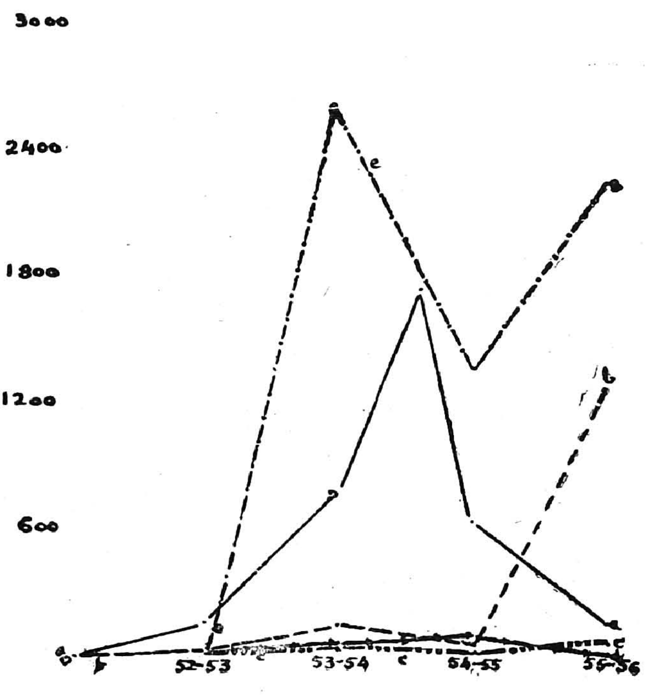
4800

KEY FARM CENTRE, PALAYAKOTTAI, shifted to SIVAGIRI.

4200

(*a*) Natural services.
(*b*) Inseminations.
(*c*) Calves born and verified.
(*d*) Castrations.
(*e*) Inoculations.

3600



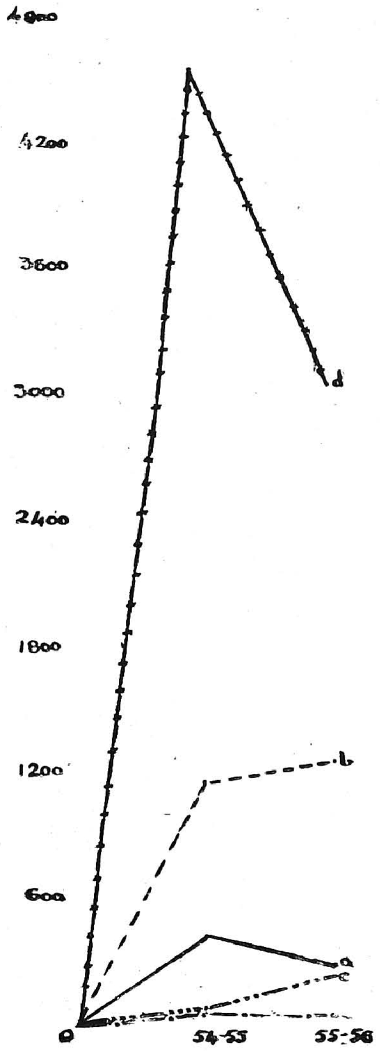
4. SANKARANDAMPALAYAM.

1 Name of centre—Key Village Centre, Sankarandampalayam.

2 Date of opening—4th March 1954.

3 Progress of work—

	1954–55.	1955–56.	Total.
(*a*) Natural services	402	289	691
(*b*) Inseminations	1,168	1,258	2,426
(*c*) Calves born and verified	67	218	285
(*d*) Inoculations	4,554	3,045	7,599
(*e*) Castrations	72	41	113



KEY VILLAGE CENTRE,
SANKARANDAMPALAYAM.

(*a*) Natural services.
(*b*) Inseminations.
(*c*) Calves born and verified.
(*d*) Castrations.
(*e*) Inoculations.

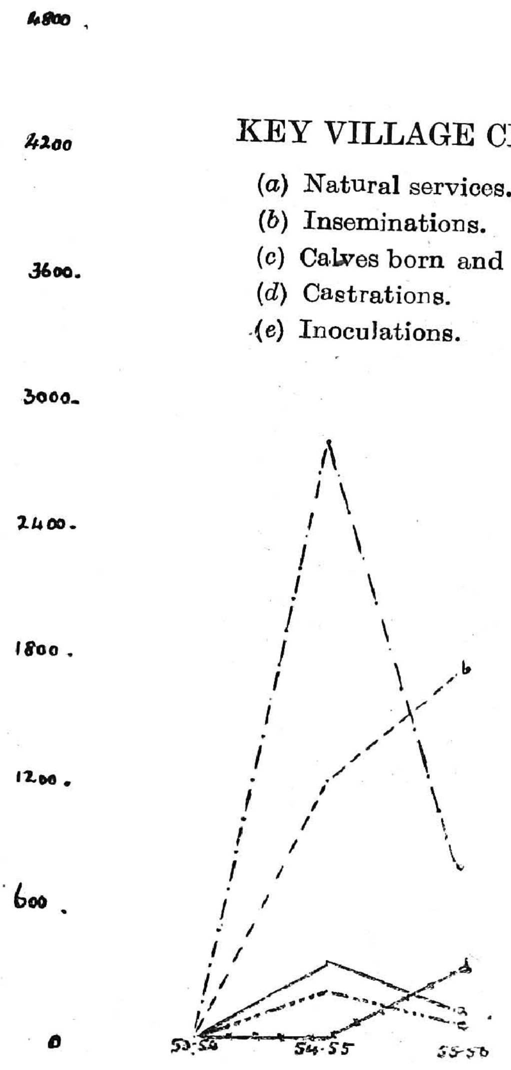
5. MULANUR.

1 Name of centre—Key Village Centre, Mulanur.

2 Date of opening—4th March 1954.

3 Progress of work—

	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services		353	138	491
(*b*) Inseminations		1,233	1,765	2,998
(*c*) Calves born and verified		1	328	329
(*d*) Castrations		219	78	297
(*e*) Inoculations		2,809	852	3,661



KEY VILLAGE CENTRE, MULANUR.

(*a*) Natural services.

(*b*) Inseminations.

(*c*) Calves born and verified.

(*d*) Castrations.

(*e*) Inoculations.

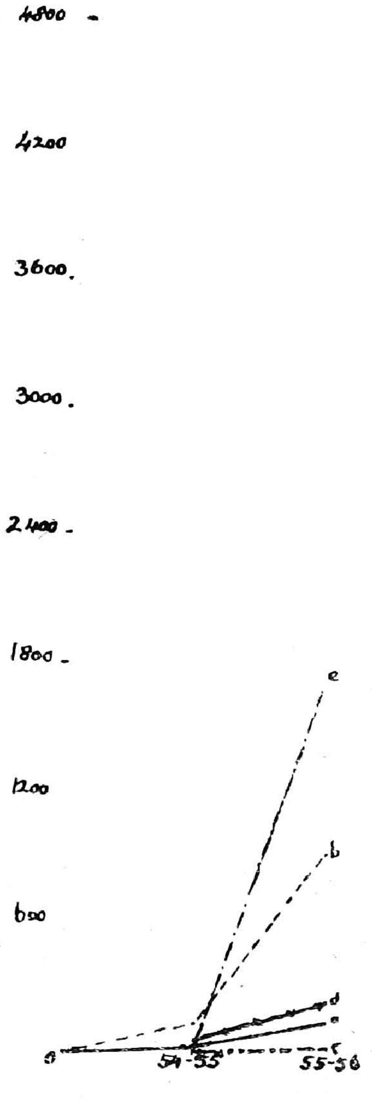
6. CHIKKANAPURAM.

1 Name of centre—Key Village Centre, Chikkanapuram.

2 Date of opening—3rd February 1955.

3 Progress of work—

	1954–55.	1955–56.	Total.
(a) Natural services	7	129	136
(b) Inseminations	128	934	1,062
(c) Calves born and verified	..	9	9
(d) Castrations	15	224	239
(e) Inoculations	..	1,700	1,700



KEY VILLAGE CENTRE,
CHIKKANAPURAM.

(a) Natural services.

(b) Inseminations.

(c) Calves born and verified.

(d) Castrations.

(e) Inoculations.

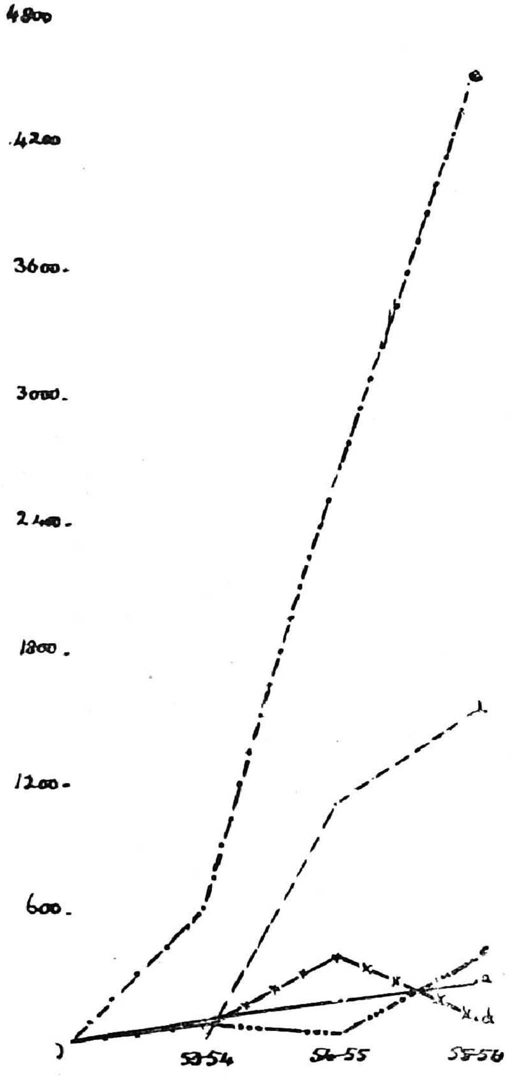
7. MALAYANDIPATNAM.

1 Name of centre—Key Village Centre, Valparai, shifted to Malayandipatnam.

2 Date of opening—27th January 1953 and 1st April 1954.

3 Progress of work—

	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services ..	92	169	216	477
(*b*) Inseminations	4	1,122	1,510	2,636
(*c*) Calves born and verified	79	18	357	484
(*d*) Castrations	22	395	96	513
(*e*) Inoculations	619	2,661	4,475	7,755



KEY VILLAGE CENTRE, VALPARAI shifted to MALAYANDIPATNAM.

(*a*) Natural services.

(*b*) Inseminations.

(*c*) Calves born and verified.

(*d*) Castrations.

(*e*) Inoculations.

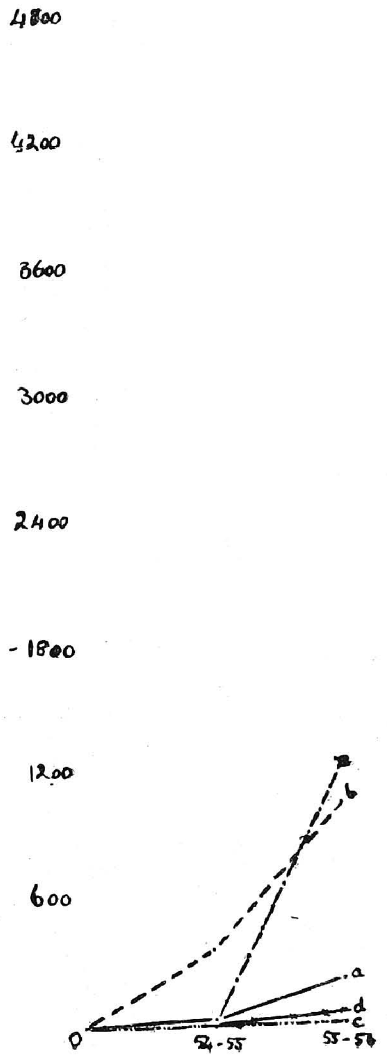
8. THOPPAMPATTI.

1 Name of centre—Key Village Centre, Thoppampatti.

2 Date of opening—3rd February 1955.

3 Progress of work—

	1954–55.	1955–56.	Total.
(a) Natural services	23	233	256
(b) Inseminations	374	1,088	1,462
(c) Calves born and verified	..	2	2
(d) Castrations	..	55	55
(e) Inoculations	..	1,206	1,206



KEY VILLAGE CENTRE, THOPPAMPATTI.

(a) Natural services.

(b) Inseminations.

(c) Calves born and verified.

(d) Castrations.

(e) Inoculations.

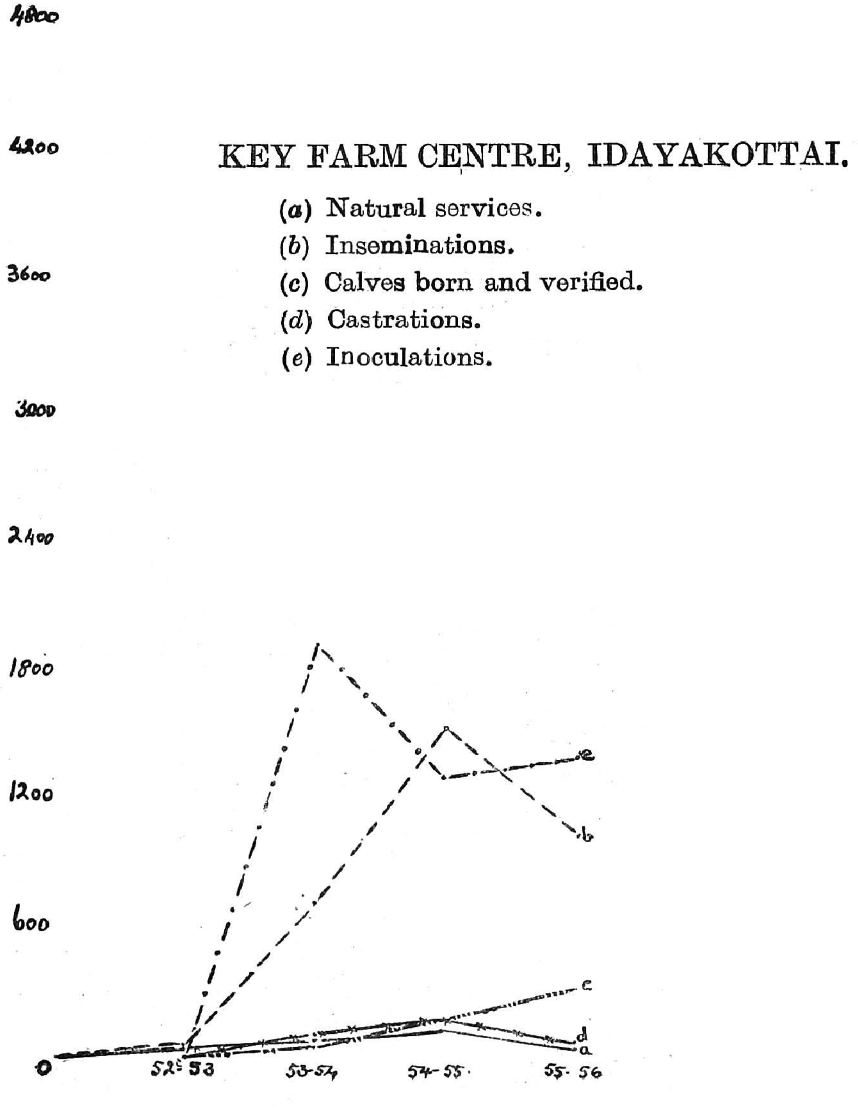
9. IDAYAKOTTAI.

1 Name of centre—Key Farm Centre, Idayakottai.

2 Date of opening—23rd January 1953.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services ..	25	90	103	57	275
(*b*) Inseminations ..	37	748	1,557	1,050	3,392
(*c*) Calves born and verified.	..	56	185	341	582
(*d*) Castrations	..	100	170	87	357
(*e*) Inoculations	..	1,959	1,336	1,421	4,716



KEY FARM CENTRE, IDAYAKOTTAI.

(*a*) Natural services.
(*b*) Inseminations.
(*c*) Calves born and verified.
(*d*) Castrations.
(*e*) Inoculations.

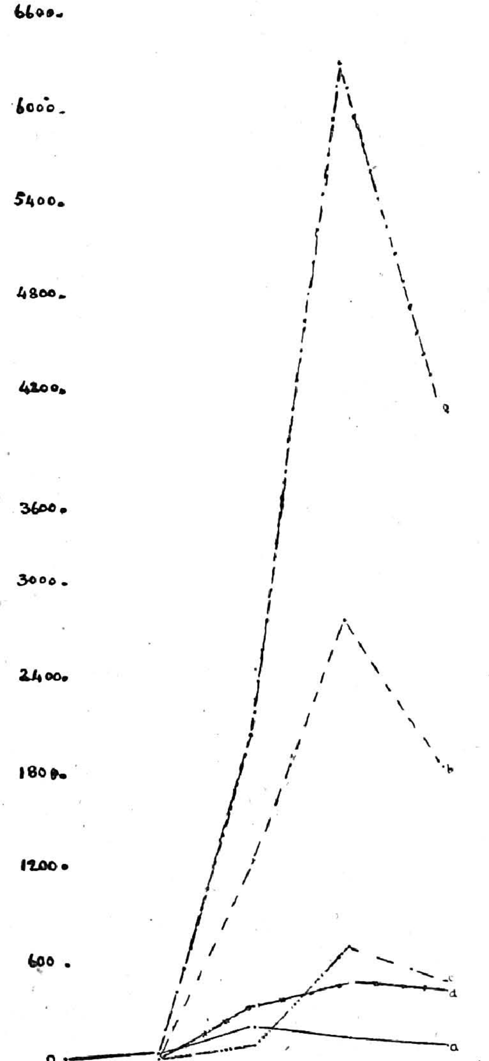
10. NEIKARAPATTI.

1 Name of centre—Key Farm Centre, Neikarapatti.

2 Date of opening—3rd February 1953.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services ..	31	216	120	52	419
(*b*) Inseminations ..	7	1,253	2,780	1,849	5,889
(*c*) Calves born and verified	..	78	719	467	1,264
(*d*) Castrations	..	340	490	410	1,240
(*e*) Inoculations	..	2,054	6,274	4,110	12,438



KEY FARM CENTRE, NEIKARAPATTI.

(*a*) Natural services.
(*b*) Inseminations.
(*c*) Calves born and verified.
(*d*) Castrations.
(*e*) Inoculations.

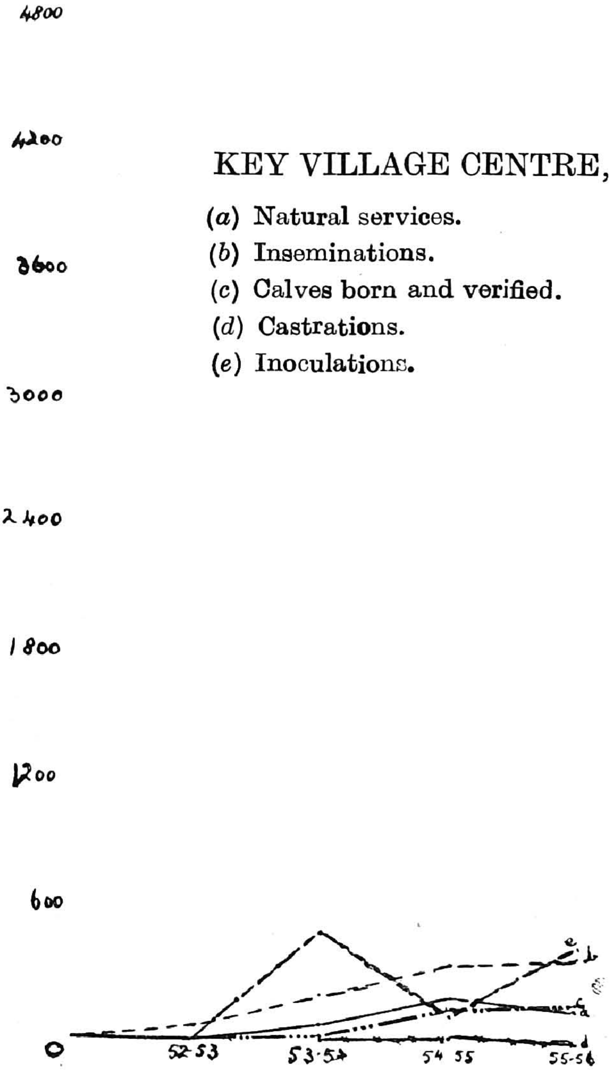
11. CINCHONA.

1 Name of centre—Key Village Centre, Cinchona.

2 Date of opening—1st February 1953.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services ..	1	90	228	164	483
(*b*) Inseminations ..	60	223	373	401	1,057
(*c*) Calves born and verified.	..	19	155	183	357
(*d*) Castrations	..	11	21	6	38
(*e*) Inoculations	..	528	125	455	1,108



KEY VILLAGE CENTRE, CINCHONA.

(*a*) Natural services.
(*b*) Inseminations.
(*c*) Calves born and verified.
(*d*) Castrations.
(*e*) Inoculations.

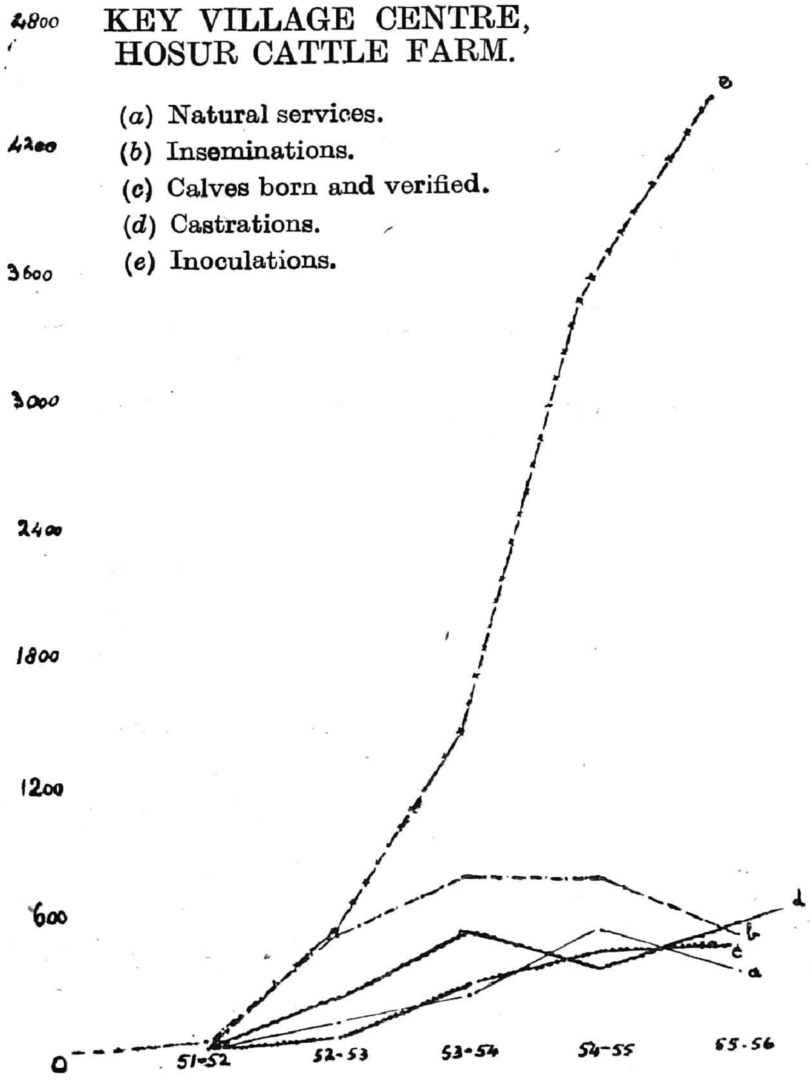
12. HOSUR CATTLE FARM.

1 Name of centre—Key Village Centre, Hosur Cattle Farm.

2 Date of opening—17th January 1951.

3 Progress of work—

	1951–52.	1952–53.	1953–54.	1954–55.	1955–56. (8 months).	Total.
(*a*) Natural services.	1	100	227	505	297	1,130
(*b*) Inseminations.	15	504	771	757	490	2,537
(*c*) Calves born and verified.	..	29	266	400	431	1,126
(*d*) Castrations ..	13	208	507	343	513	1,584
(*e*) Inoculations.	..	548	1,451	3,459	4,438	9,896



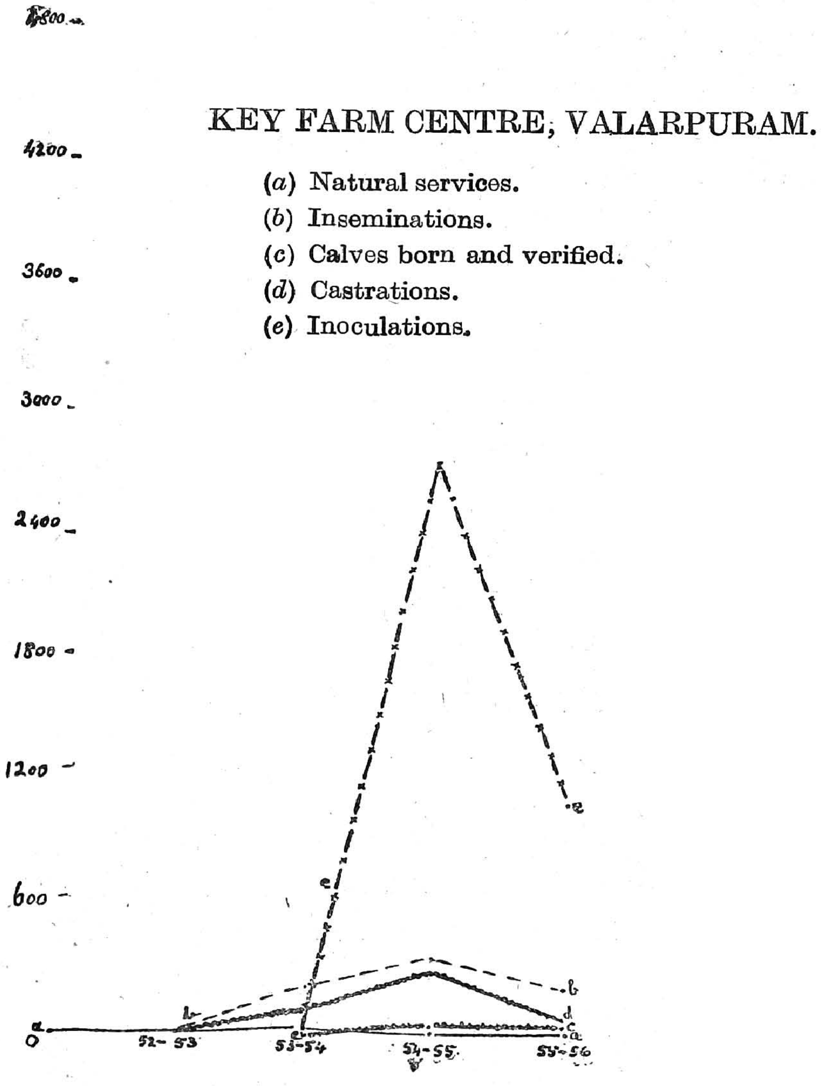
13. VALARPURAM.

1 Name of centre—Key Farm Centre, Valarpuram.

2 Date of opening—7th February 1953.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services ..	2	7	6	3	18
(*b*) Inseminations ..	1	245	388	246	880
(*c*) Calves born and verified.	..	4	50	52	106
(*d*) Castrations	..	115	339	94	548
(*e*) Inoculations. ..	..	..	2,762	1,147	3,909



14. KILACHERI.

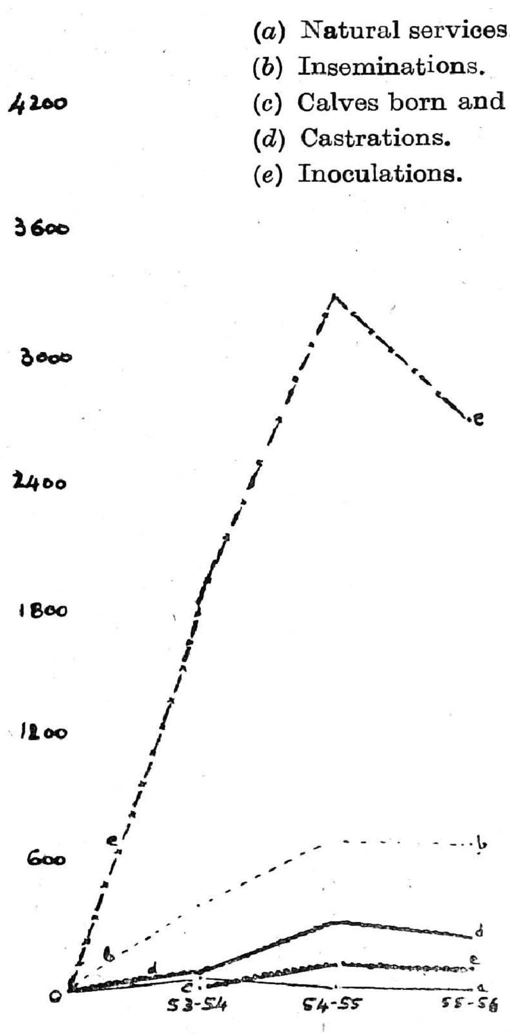
1 Name of centre—Key Farm Centre, Kilacheri.

2 Date of opening—7th February 1953.

3 Progress of work—

	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services	56	12	..	68
(*b*) Inseminations	402	715	707	1,824
(*c*) Calves born and verified ..	3	126	105	234
(*d*) Castrations	82	339	265	686
(*e*) Inoculations	1,888	3,314	2,738	7,940

KEY FARM CENTRE, KILACHERI.



15. CHIDAMBARAM.

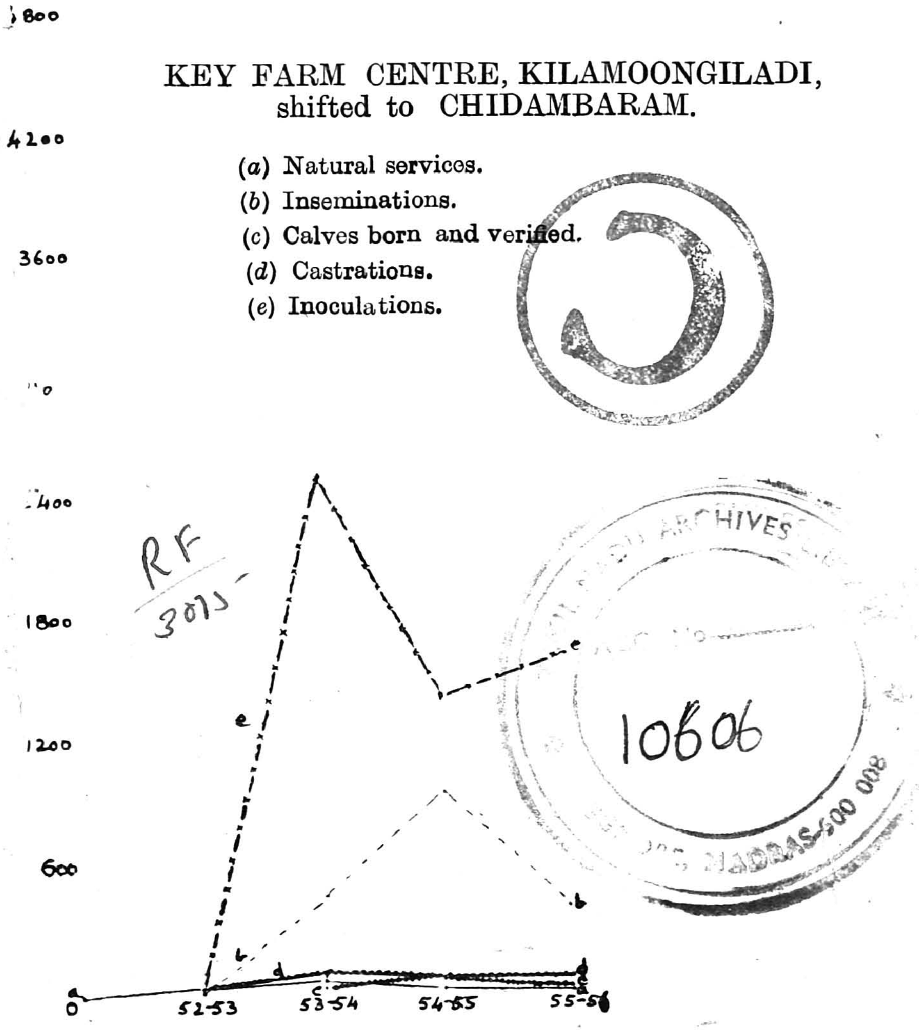
1 Name of centre—Key Farm Centre, Kilamoongiladi, shifted to Chidambaram.

2 Date of opening—18th February 1953 and 19th August 1954.

3 Progress of work—

	1952–53.	1953–54.	1954–55.	1955–56.	Total.
(*a*) Natural services	9	52	11	14	86
(*b*) Inseminations	6	469	960	430	1,865
(*c*) Calves born and verified.		21	81	46	148
(*d*) Castrations ..	20	95	86	71	272
(*e*) Inoculations ..	..	2,538	1,424	1,633	5,595

KEY FARM CENTRE, KILAMOONGILADI, shifted to CHIDAMBARAM.



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